Fortuna Workstation
User Manual

origio

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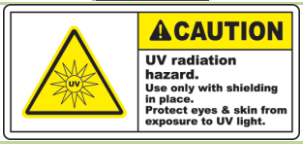
HOW TO USE THIS MANUAL

Warning, Cautions and important Notes

Throughout this manual, blocks of text may be accompanied with a pictogram. These blocks are WARNINGS, CAUTIONS, and IMPORTANT NOTES and they are used as follows:

Symbols used in this Manual:

	NOTE Used to direct attention to a special item.
	WARNING
	DANGER UV light radiation hazard. Use only with shielding in place. Protect eyes and skin from exposure to UV light.
	FURHTER INFORMATION Further information is provided in other sections or manuals.

INTRODUCTION

You are now in possession of a high quality microprocessor-controlled FORTUNA IVF Class I Clean Air workstation and it is designed to provide:

- Protection of the processed product against particle /microbiological contamination
- Heating control of the heated work area for sample handling
- Gassing and Humidification control (Optional)
- Heating control of the light opening for morphology study under microscopy (Optional)

This user manual covers the following models:

- FORTUNA IVF Clean Air 900
- FORTUNA IVF Clean Air 1200
- FORTUNA IVF Clean Air 1500
- FORTUNA IVF Clean Air 1800
- FORTUNA IVF Clean Air 1800 Dual
- FORTUNA IVF Clean Air 1800 MP
- FORTUNA IVF Clean Air 1800 ICSI
- FORTUNA IVF Clean Air 1200 ICSI

The FORTUNA IVF Clean Air cabinet has a built-in microprocessor controller featuring:

- LCD display indicating fan and alarm status.
- Air velocity sensors
- Clock (7 days) and hour-counter.
- Pre-setting of automatic start-up and UV timer.
- Alarm for any deviation from safety conditions.

Furthermore, the FORTUNA IVF Clean Air workstation has the following characteristics:

- An ergonomically correct 10° sloping front for maximum operator comfort.
- Fixed front window, leaving a work opening of 55 cm.
- Side windows in safety glass for perfect light conditions and view to the surroundings.
- Negative pressure plenum for highest sample safety.
- Adjustable fan speeds.
- Work chamber with tabletop in stainless steel (AISI 304).
- The internal light is installed between the air distributor and the main filter. This secures that the light is glare-free and the airflow is turbulence free.

SAFETY INSTRUCTIONS

To avoid unintended or improper operation of the workstation, please read this manual carefully

Before operation of the workstation

Before operating your workstation, please note the following:

	The work chamber is to be carefully cleaned and/or disinfected. Use only hydrogen peroxide (H_2O_2 Solutions) or products suitable to be used in an IVF lab. NEVER use ammonia or chlorinated cleaners. It is recommended to use special lint-free wipes.
	To ensure that the working area is clean and sterile the workstation fan must be run at normal speed for at least 30 minutes prior to working inside the Workstation.
	Objects and instruments must be carefully cleaned and/or disinfected before bringing them into the work chamber.
	Necessary instruments for use during work must be placed within reach to avoid unnecessary movement inside the Workstation.
	For reliable operation it is important that the air-flow conditions are as unobstructed as much as possible. Therefore, never overload the work chamber.
	Put on necessary personal clothing for reducing particle emission from operator (i.e. gloves, masks and general clean room clothing). Special attention should be given to hands and lower parts of the arms, as these are the parts of the operator most likely to emit particles near the product.
	All work in the workstation must be performed with slow movements. Rapid arm movements in the chamber may cause slipstreams, which will draw contaminated air into the work chamber.
	Transport of possibly contaminated material may create airflows which can contaminate the product.
	The safety cabinet must not be used for working with materials which can cause allergic reactions, or any harm to the health of the operator or the personnel. Attention is drawn to the risk assessment requirements of the Control of Substances Hazardous to Health (COSHH) Regulations 1999. (UK)
	The cabinet is not suitable for HIGH-RISK biological agents. HIGH RISK biological agents include all etiologic agents designated Class 4 by CDC, and oncogenic viruses classed high risk by NCI. (USA)
	Never operate the FORTUNA cabinets if the fan compartment cover is removed. If this cover is removed, the cabinet will give no protection of the operator or the environment and the fan will run with openly rotating blades.
	The workstation will not provide any protection for operator or environment against harmful gases or vapors.

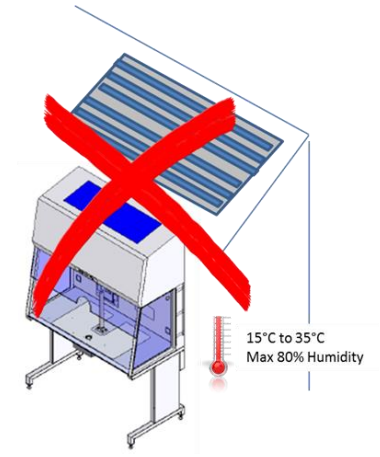
INSTALLATION

Please see the installation manual

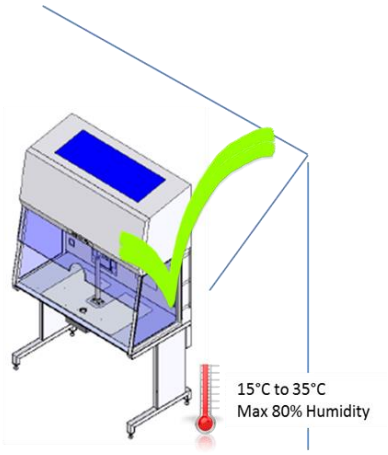
Device Placement

The device should be placed on a level secure surface, away from heaters, coolers and air-conditioning outlets.

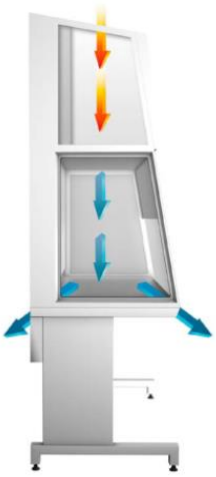
The device may only be operated at temperatures ranging between 15 °C and 35°C, with a maximum 80% relative humidity, and at normal air pressure.



Do not place under an HAVC air outlet



AIR FLOW WORKING PRINCIPLE



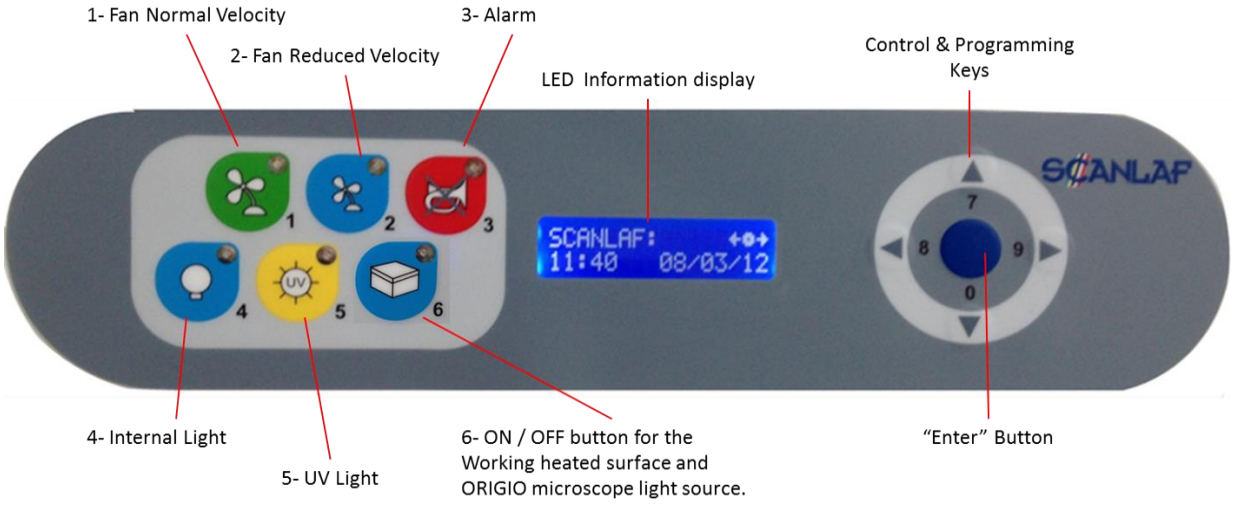
The vertical clean air cabinet is a turbulence-free (laminar) vertical displacement flow of clean air in the work chamber protecting the product against particle contamination.

Filters: The FORTUNA IVF Clean Air workstation main filter is a high-efficiency HEPA filter class (H14) and the pre-filter of FORTUNA is EU-3 type to capture dust particles for increased life tile of the HEPA filter.

Air velocity monitoring: The turbulence-free vertical flow can be monitored by means of an air velocity sensor. Any deviation from safe conditions will be indicated visually and acoustically.

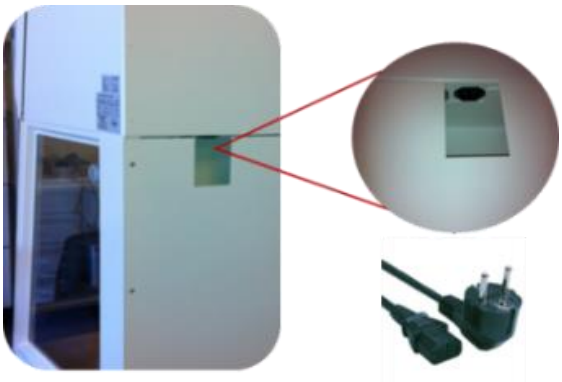
CONTROL PANEL

During normal use, the LED display shows the time and the day and the “Control and programming keys” to navigate through the menu program. The numbers 0 to 9 in the control and programming keys are for programming purposes.



GENERAL OPERATING PROCEDURES

Connecting the power cord



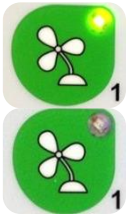
Connect the power cord to the mains power inlet. The power inlet is located at the back of the workstation. The power outlet must be grounded.

As soon as the device is connected an audible alarm will be activated, an LED light will turn on and a message with POWER UP ERROR will be activated on the control panel.

Press the “enter” button to switch off the alarm and to return to safe mode.

Please see the installation manual for further information.

Switching the Fans ON / OFF at Normal Speed



Press the “1- Fan Velocity” button to turn the fans ON. When activated a small green light on top of the button will switch on.

Press the “1- Fan Velocity Button” to turn the fans OFF. When activated the small light on top of the button will be OFF.

To prevent any accidental switching on or off of the fan, the buttons for normal and reduced velocity must be activated for at least 15 seconds before they take effect.

DO NOT WORK IN THE WORK SPACE AREA WHEN THE FANS ARE SWITCHED OFF

Switching the Fans ON / OFF at Reduced Speed

Press the “2- Fan Reduced Velocity” button to turn the fans ON. When activated a small blue light on top of the button will switch on.

Press the “2- Fan Velocity Reduced Button” to turn the fans OFF. When activated the small light on top of the button will be OFF.

When turning ON the reduced speed velocity, the internal light will turn off to alert the user. The internal light can be switched on again if needed.

Alarm

When an alarm is activated an audible acoustic signal is activated. On the control panel a small red light is activated on the Alarm button. Press the Alarm Button to mute the acoustic alarm signal.

The error causing the alarm will be explained on the LED display.

When the error has been fixed the audible alarm and the small red light are switched off.

MUTING THE ACOUSTIC SIGNAL WILL NOT SOLVE THE PROBLEM THAT CAUSED THE ERROR

Internal Light

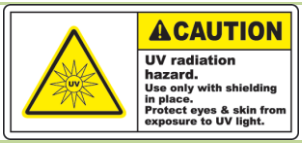
To switch ON the illumination light of the work chamber, press the “4-Internal Light” button. When activated, a small blue light on top of the button will switch on.

To switch OFF the illumination light of the work chamber, press the “4-Internal Light” button again. The small light on top of the button will be OFF.

To adjust the light intensity, refer to the section “Adjusting the level intensity of the internal light”.

UV Light

The UV light and UV light timer are optional features.



For increased safety against unintended UV radiation which will harm eyes and skin, use the timer to start the UV decontamination when no personnel is present in the room where the workstation is located. Use the front shield cover (Optional) to contain the radiation

To program the UV light time, refer to the section “Programming and Controlling the UV light timer”.

To switch OFF the illumination light of the work chamber, press the “4-Internal Light” button again. The small light on top of the button will be OFF.

To switch ON the UV light for decontaminating the work chamber, press the “5- UV Light” button. When activated a small yellow light on top of the button will switch on

Working Heated Surface and ORIGIO Light Source

To operate the heated work area, refer to the section “Heated Surface”.

To switch ON the ORIGIO Light Source and the working heated surface (s), press the button. When activated a small blue light on top of the button will switch on. This button simultaneously activates the working heated surface and the ORIGIO light source. (Note this feature is not available on the FORTUNA ICSI models)

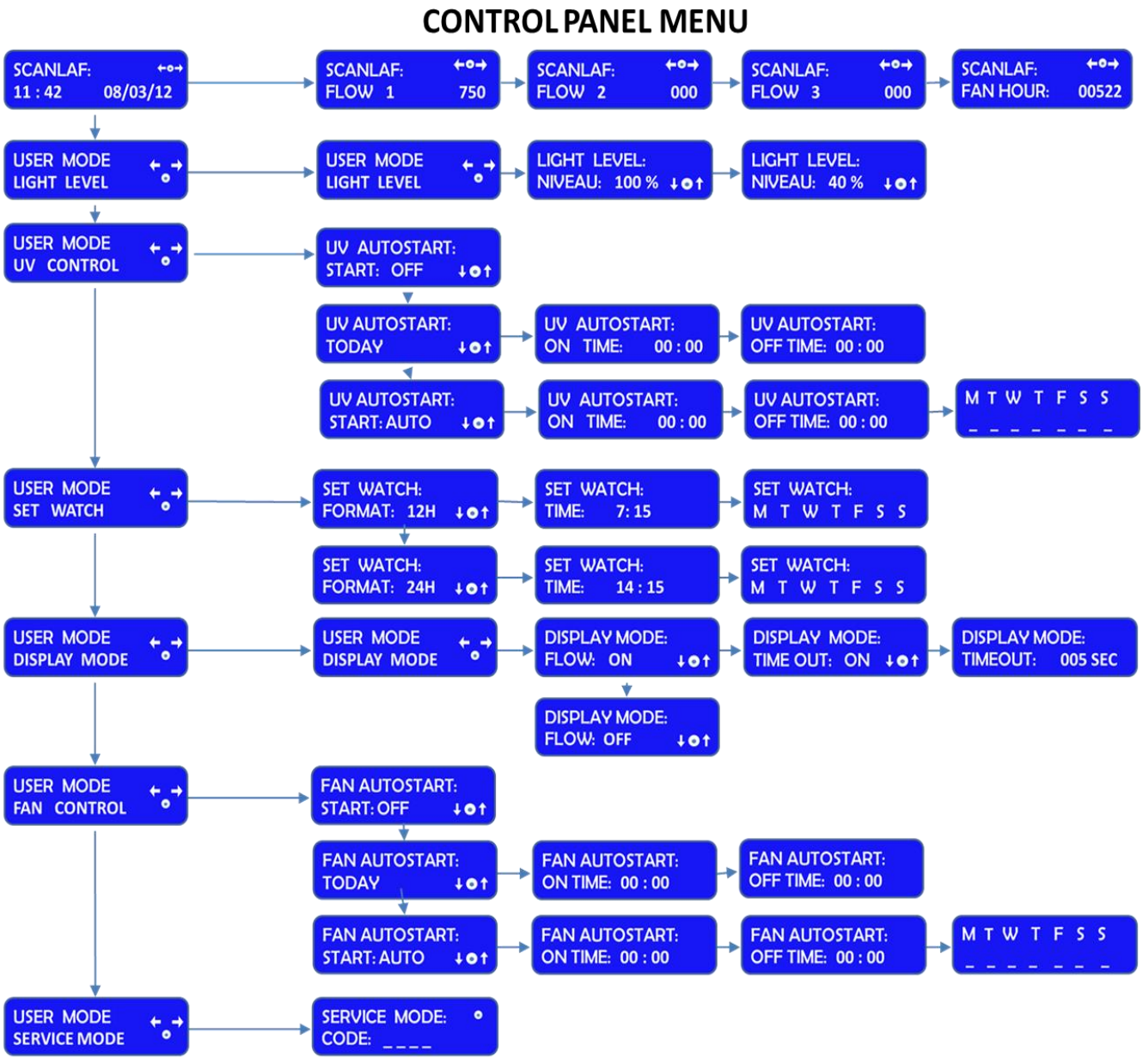
To switch OFF the ORIGIO Light Source and the working heated surface (s), press the button again. The small light on top of the button will be switched OFF.

CONTROL & PROGRAMMING

This section describes how to access the different menus and how to control and to program some the features offered with your workstation. The Control & Programming menu of your workstation contains the following:

SCANLAF: 11 : 42 08/03/12	Standard display
USER MODE LIGHT LEVEL	Adjusting the intensity of the internal light
USER MODE UV CONTROL	Programming and controlling the UV light timer
USER MODE SET WATCH	Setting the internal clock
USER MODE DISPLAY MODE	Adjusting display settings
USER MODE FAN CONTROL	Programming and controlling the automatic start and shut-off of the fan
USER MODE SERVICE MODE	Entering the service mode

Overview of the Control Panel Menu

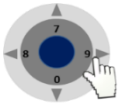

CONTROL PANEL MENU
SCANLAF: 11 : 42 08/03/12
SCANLAF: FLOW 1 750
SCANLAF: FLOW 2 000
SCANLAF: FLOW 3 000
SCANLAF: FAN HOUR: 00522
USER MODE LIGHT LEVEL
LIGHT LEVEL: NIVEAU: 100 %
LIGHT LEVEL: NIVEAU: 40 %
USER MODE UV CONTROL
UV AUTOSTART: START: OFF
UV AUTOSTART: TODAY
UV AUTOSTART: ON TIME: 00 : 00
UV AUTOSTART: OFF TIME: 00 : 00
UV AUTOSTART: START: AUTO
M T W T F S S
USER MODE SET WATCH
SET WATCH: FORMAT: 12H
SET WATCH: TIME: 7: 15
SET WATCH: M T W T F S S
SET WATCH: FORMAT: 24H
SET WATCH: TIME: 14 : 15
USER MODE DISPLAY MODE
DISPLAY MODE: FLOW: ON
DISPLAY MODE: TIME OUT: ON
DISPLAY MODE: TIMEOUT: 005 SEC
DISPLAY MODE: FLOW: OFF
USER MODE FAN CONTROL
FAN AUTOSTART: START: OFF
FAN AUTOSTART: TODAY
FAN AUTOSTART: ON TIME: 00 : 00
FAN AUTOSTART: OFF TIME: 00 : 00
FAN AUTOSTART: START: AUTO
USER MODE SERVICE MODE
SERVICE MODE: CODE: _ _ _ _

General air flow information & counter

This section describes how to access information about the running hours of the fan. Depending on the configuration of the workstation, there can be up to two fans, designated FLOW 1, FLOW 2.

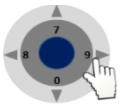
To learn how to enable and disable these functions refer to the section "Programming the Air Flow to Auto Start".

Standard display.



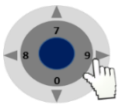
Press the right or left arrow button to navigate towards the FLOW information.

SCANLAF with FLOW 1 will be displayed together with a value. This value is for internal service information.



Press the right or left arrow button to navigate towards the FLOW information.

SCANLAF with FLOW 2 will be displayed together with a value. This value is for internal service information.



Press the right or left arrow button to navigate towards the FLOW information.

SCANLAF with FAN HOUR will be displayed together with a value. This value is the number of hours the fan has been running.

Adjusting the level intensity of the internal light

This section covers how to adjust the light intensity of the internal light of the workstation.

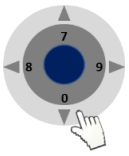
Standard display.

Press the “enter” button to enter the menu.

The USER MODE with the “LIGHT LEVEL” will be displayed together with a representation of the “Control & Programming Keys”. The first line with the arrow symbol “⬅ ➡”enables the user to go back to the previous menu or to move to another function. The symbol “**o**” represents the “ENTER” button.

Press the “enter” button to validate your choice.

The LIGHT LEVEL and “NIVEAU: 100 % will be displayed together with a representation of the Control & Programming Keys



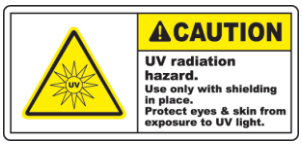
Press on the up or down arrow. The level of intensity will go up or down. Repeat pressing on the arrow until you reach the level of intensity desired. If you hold down the arrow, the light intensity will change more rapidly.

Press on the “enter” button to validate and to return to the MENU or wait a few seconds and the display will return by itself to the standard display

Programming and Controlling the UV light timer

This section describes how to program the UV light timer.

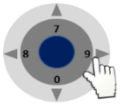
Note: for this feature to work correctly, you must set up the date and time first. How to do this is described in the section “Programming Time and Date”



For protection against unintended UV radiation which will harm eyes and skin, use the timer to start the UV decontamination when no personnel is present in the room where the workstation is located. Use the front shield cover (optional) to contain the radiation.

Standard display.

Press the “enter” button to enter the menu.

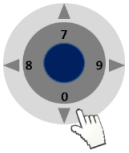


Press on the right arrow button to enter the next menu.

The USER MODE with the “UV CONTROL” will be displayed together with a representation of the “Control & Programming Keys. The first line with the arrows symbol “⬅ ➡”enables the user to go back to the previous menu or to move to another function. The symbol “**o**” represents the “enter” button.

Press the “enter” button to validate your choice.

The UV AUTOSTART with START: OFF will be displayed.



Press the up or down arrow to change the settings between START: OFF, TODAY and START: AUTO.

If you wish to program the UV light to start today, use UV AUTOSTART TODAY.

If you wish to program the UV light to start on a different day, use UV AUTOSTART START: AUTO.

UV Autostart Option Selected: “TODAY”

Press the “enter” button to enter the menu.

The UV AUTOSTART and “ON TIME: 00:00” will be displayed. This is the time at which the UV light should start

Press the “enter” button to validate your choice.

The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the Time when the UV Light will switch ON automatically

Press the “enter” button to validate your choice.

The UV AUTOSTART and “OFF TIME: 00:00” will be displayed. This is the Time at which the UV Light will switch off.

Press the “enter” button to validate your choice.

The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the time when the UV light will turn OFF automatically.

Press the “enter” button to validate your choice.

UV Autostart Option Selected: “AUTO”

Note: for this feature to work correctly, you must set up the date and time first. How to do this is described in the section “Programming Time and Date”

Press the “enter” button to enter the menu.

The UV AUTOSTART and “ON TIME: 00:00” will be displayed. This is the time at which the UV light should start

Press the “enter” button to validate your choice.

The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the time when the UV Light will switch ON automatically

Press the “enter” button to validate your choice.

The UV AUTOSTART and “OFF TIME: 00:00” will be displayed. This is the Time at which the UV Light will switch off.

Press the “enter” button to validate your choice.

The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the time when the UV light will turn OFF automatically.

Press the “enter” button to validate your choice.

The Week display will appear “ M T W T F S S”

Press the “enter” button to validate your choice.

The Monday option will be blinking.

Press on the UP arrow to select Monday or press the right and left arrows to navigate between the days,

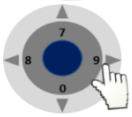
In this example the Monday option will be marked with an “X” to indicate that the UV light will be ON, on Monday at the desired time and will be switched OFF at the desired time programmed earlier in this section.

Press on the “enter” button to confirm

Programming Time and Date

This section describes how to set the time and the date.

Press the “enter” button to enter the menu.



Press the right or left arrow button to reach the menu displaying “SET WATCH”.

The USER MODE menu with SET WATCH will be displayed together with a representation of the “Control & Programming keys”.

Press the “enter” button to enter the menu.

The SET WATCH menu with FORMAT: 12H or 24H will be displayed together with a representation of the “Control & Programming keys”

Press on the DOWN or UP arrows to change the settings from 12H to 24H and vice versa.

Press the “enter” button to enter the menu.

The SET WATCH menu with TIME will be displayed.

The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel.

Example: Setting up the watch at 16:39

Press on the button that has the number **1** and it will be registered on the display.

The second digit of the hour will be blinking.

Press on the button that has the number **6** and it will be registered on the display. Continue like this to fill out all digits.

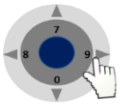
Press the “enter” button to enter the menu, and press the right or left arrow buttons to reach the menu displaying “SET WATCH”.

The SET WACH menu with the day's first letter "M T W T F S S" will be displayed.

Press on the RIGHT or LEFT arrow button to navigate to the correct day.

Press the "enter" button to validate your choice.

The SET WACH menu with DATE will be displayed. The Date has the format of DD / MM/ YY.

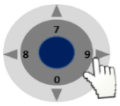


Press on the RIGHT arrow button to navigate to the day, month or year section. Use the same method as for setting the time to enter the date.

Programming the Air Flow to auto start (Weekly or Daily)

This section describes how to enable and program the airflow to auto start on a specific date and time, and how to disable that feature.

Press the "enter" button to enter the menu.

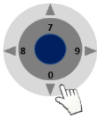


Press on the RIGHT or LEFT arrow button to reach the menu displaying "FAN CONTROL"

The USER MODE menu with FAN CONTROL will be displayed together with a representation of the "Control & Programming Keys.

Press on the "ENTER" button to enter the menu

The FAN AUTOSTART and "START: OFF" will be displayed.This indicates that the auto start function is disabled.



Press Down or UP to change the settings. Two options can be selected FAN AUTOSTART: TODAY, or, FAN AUTOSTART: START:AUTO.:

The FAN AUTOSTART and "TODAY" indicates that the auto start function can be programmed for the current day at a specific time.

The FAN AUTOSTART and "START: AUTO" indicates that the auto start function can be programmed any given day and time.

Option selected: TODAY

Press the "enter" button to enter the menu.

FAN AUTOSTART: ON TIME: 00 : 00	The FAN AUTOSTART and “ON TIME: 00:00” will be displayed. This is the time at which the fans should start.
	Press the “enter” button to enter the menu.
FAN AUTOSTART: ON TIME: ■0 : 00	The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the time when the fan will turn ON automatically.
	Press the “enter” button to validate your choices.
FAN AUTOSTART: OFF TIME: 00 : 00	The FAN AUTOSTART and “OFF TIME: 00:00” will be displayed. This is the time at which the fans will turn off.
	Press the “enter” button to enter the menu.
FAN AUTOSTART: OFF TIME: ■0 : 00	The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the time when the fan will turn OFF automatically.
	Press the “enter” button to confirm your choices.

Option selected: AUTO

	Note: for this feature to work correctly, you must set up the date and time first. How to do this is described in the section “Programming Time and Date”
	Press the “enter” button to enter the menu.
FAN AUTOSTART: ON TIME: 00 : 00	The FAN AUTOSTART and “ON TIME: 00:00” will be displayed. This is the time at which the fans should start.
	Press the “enter” button to enter the menu.
FAN AUTOSTART: ON TIME: ■0 : 00	The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the time when the fan will turn ON automatically.
	Press the “enter” button to validate your choices.
FAN AUTOSTART: OFF TIME: 00 : 00	The FAN AUTOSTART and “OFF TIME: 00:00” will be displayed. This is the time at which the fans will turn off.

Press the “enter” button to enter the menu.

The first digit of the hour will be blinking. To enter the hour press the appropriate number found on the control panel. Continue this operation for the hours and the minutes. This will indicate the time when the fan will turn OFF automatically.

Press the “enter” button to confirm your choices.

The Week display will appear “ M T W T F S S”

Press the “enter” button to validate your choice.

The Monday option will be blinking.

Press on the UP arrow to select Monday or press the right and left arrows to navigate between the days,

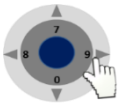
In this example the Monday option will be marked with an “X” to indicate that the fan will be ON, on Monday at the desired time and will be switched OFF at the desired time programmed earlier in this section.

Press on the “enter” button to confirm

Display Mode Functions

This section describes how to enable and disable the Flow and Fan information presented in the overview of the control panel menu.

Press the “enter” button to enter the menu.



Press on the RIGHT or LEFT arrow button to reach the menu displaying “DISPLAY MODE”

The USER MODE menu with DISPLAY MODE will be displayed together with a representation of the “Control & Programming Keys”.

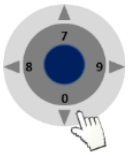
Press the “enter” button to enter the menu.

The DISPLAY MODE and “FLOW: ON” will be displayed together with a representation of the Control & Programming Keys.

Press on the up or down arrow to select the between up or on mode. This feature will disable the view of the information on FLOW 1, FLOW 2 AND FLOW 3:

Press Enter to validate. The display will return to DISPLAY MODE.

Press the “enter” button to enter the menu.

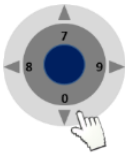


Press on the DOWN or UP arrow to reach the following display:

The DISPLAY MODE and “TIME OUT” will be displayed together with a representation of the Control & Programming Keys.

Press on the “ENTER” button to enter the menu to turn this function ON or OFF. Turning this function OFF will disable the following display and return to DISPLAY MODE

Press the “enter” button to enter the menu.



Press on the DOWN or UP arrow to reach the following display:

The DISPLAY MODE and “TIME OUT: 005 SEC” will be displayed. This feature indicates that any information or changes will remain displayed for 5 seconds before returning to the Standard Display. The display time is of a minimum of 5 seconds and therefore can only be increased. To increase the duration of the displayed information use the UP and DOWN arrows.

HEATED SURFACE

See also the section “Working Heated Surface and ORIGIO Light Source”.

The heated surface is only applicable on the following FORTUNA IVF models:

- FORTUNA 900 IVF
- FORTUNA 1200 IVF
- FORTUNA 1500 IVF
- FORTUNA 1800 IVF
- FORTUNA 1800 DUAL
- FORTUNA 1800 MP

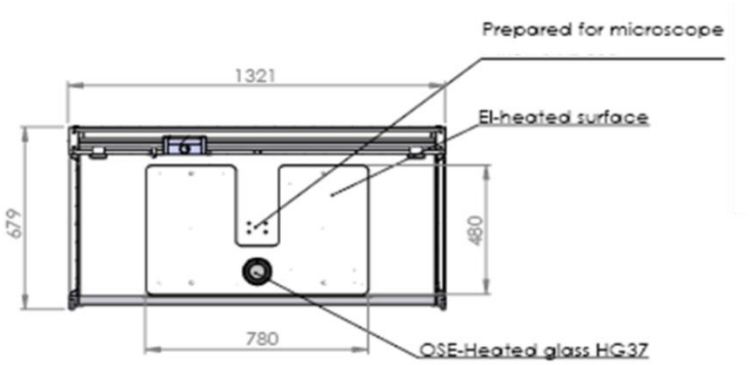
There are two types of heated surfaces for your workstation:

- Electrical heating (standard solution, described in this manual).
- Liquid heating with a water circulator pump (please refer to the user manual of the water circulator pump, not included in this manual)

The heated area is indicated by a brushed steel effect in the work surface.

Operational Characteristics

The heated surfaces, will be heated to 37ºC, and are controlled by an accurate sensor and a control processor.



Example of a warmed surface

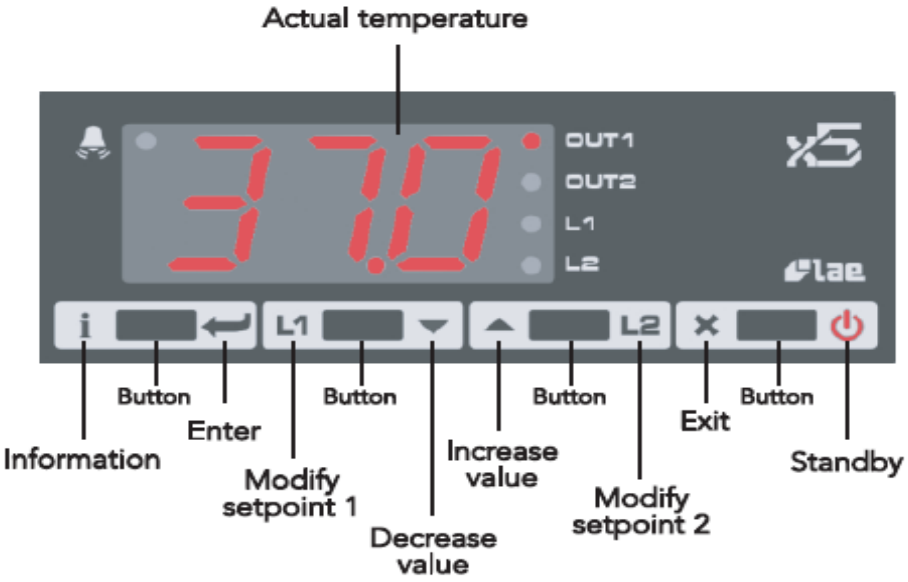
Placing of large hot or cold masses on the heated elements will affect the regulation process and should be avoided during normal operation.

Placing a hand will also draw heat from the surface, therefore please avoid placing fingers or a hand on the surface during warming up or during the calibration of the controller.

Turn on the heating system at least 60 minutes before starting the work. If possible place all needed equipment on the surface during the warming up period to warm these appropriately. Always wait for the temperature to stabilize completely before starting work.

CAUTION. There is heat loss from the edges of the heated surface. Do not place temperature sensitive material there.

Temperature Controller



The display shows the temperature readout from the chosen channel (only channel 1 is used in this example). In case of an alarm situation a red light will start flashing in the top left-hand corner of the display. On the right-hand side of the display it is indicated which parameter is shown in the display. Below is listed all possible values and messages that can be shown in the display:

Display	Description
OFF	Controller is in standby
OR	Probe T1 out of range or failure
HI	Room high temperature alarm
LO	Room low temperature alarm
TUN	Controller is in auto tuning
E1	In tuning: Timeout 1 error
E2	In tuning : Timeout 2 error
E3	Out of range error

LED	Description
OUT1	Channel 1 output
OUT2	Channel 2 output
L1	Channel 1 set point modification
L2	Channel 2 set point modification
	Alarm

Information	Description
THI	Maximum temperature recorded
TLO	Minimum temperature recorded
LOC	Keypad state lock

The four buttons for operating the temperature controller are placed below the display. These are described in the figure above.

Each button has two functions - one in each side of the button. Simply press the appropriate symbol to use the buttons.

The heated surface is designed to provide and maintain a constant 37 °C over the heated part of the working surface to within ± 0.2 °C at a maximum ambient temperature of 35 °C. The controller is operating in PID (Proportional-Integral-Derivative) mode to get the most accurate and stable temperature possible.

User Setup

The units are delivered ready for use from the factory. Should it be necessary to access the parameters in the temperature controller, the process is described here.

Button	Description
	Show value
	Select data by using the up and down arrows
	Enter
	Exit the menu

Note: After 10 seconds without activity, the menu will exit.

Accessing the parameters and information menu

 Press and release the information button.

To the select the data to be displayed press the UP or DOWN arrow.

 Press the information button to display the value you have selected.

Resetting the THI and TLO recordings

To the select the data to be reset press the UP or DOWN arrow.

 Press the information button to display the value you have selected.

To reset the value, press and hold the information button simultaneously with the exit button.

Channel 1 set point

Press and release L1. The LED L1 will flash and the display will show 1SP (set point) for 1 second and then the set point associated value.

To select the desired value press the UP or DOWN arrow.

To store the desired value press enter or wait 10 seconds.

To reset the value, press and hold the information button simultaneously with the exit button.

Standby

This section describes how to put the controller on standby, or resume from standby.

Press down the standby button for 3 seconds**.**

Keypad lock

The keypad lock can be used to protect the settings from intentional or unintentional changes.

Press the information button to enter the INFO menu.

Use the UP and DOWN arrows to select LOC (keypad lock). Set the parameter LOC = YES to lock the keypad.

To unlock the keypad, change the setting to LOC = NO.

Operating the heated areas

Normal Operation

The temperature controller will maintain the work surface temperature at 37 °C and will not require any user interaction after the initial setup performed by a service technician.

Checking the temperature

The actual temperature of the surface is shown on the display (OUT1). L1 will show the set point temperature.

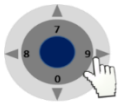
TROUBLESHOOTING YOUR WORKSTATION

Flow 1 alarm

You have an alarm on the FLOW 1. This indicates that a calibration of the inflow and downflow is needed.

Before starting make sure that the window is lowered to its normal working height. Make sure that all accessories, devices regularly used in the workstation are in place and not taken out. Then follow the instructions

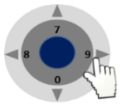
From STANDARD DISPLAY



Press on the RIGHT or LEFT arrow button to navigate towards the Information menu until you reach the SERVICE MODE

Press on the “ENTER” button to enter the service functions

Enter the code 1234 using the numbers found on the control panel and press enter.



Press on the RIGHT or LEFT arrow button to navigate towards the Information menu until you reach the FLOW SENSORS menu

Press on the “ENTER” button

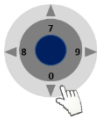
FLOW SENSOR 1 with as a standard type ANALOG will be displayed. If not SWITCH will be displayed. FLOW SENSOR 1 is the down flow.

Press on the “ENTER” button

NEW CALIBRATION will be displayed.

Press on the “ENTER” button

FLOW ALARM 1 with HIGH and a set of values will be displayed (e.g. 0285)



Press on the arrow down until the alarms starts. By pushing the arrow the numbers will decrease by units

By maintaining a constant pressure on the arrow, the numbers will decrease by decimals

Press on the arrow up one unit at a time and wait for 2 to 3 seconds to see if the alarm stops.

Repeat the operation until the alarm stops.

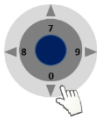
When the alarm has stopped, read the value displayed: e.g. 0225. Add 50 to the number: 0225 + 50 = 0275. Press on the arrow up until you reach this number.

Press on the “ENTER” button

FLOW ALARM 1 with LOW and a set of values will be displayed (e.g. 0175)

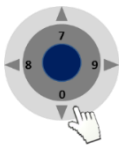
Press on the arrow up until the alarms starts. By pushing the arrow the numbers will decrease by units

By maintaining a constant pressure on the arrow, the numbers will decrease by decimals



Press on the arrow down one unit at a time and wait for 2 to 3 seconds to see if the alarm stops.

Repeat the operation until the alarm stops.



When the alarm has stopped, read the value displayed: e.g. 0125. Add 50 to the number: 0125 + 50 = 0175. Press on the arrow down until you reach this number.

Press on the “ENTER” button

FLOW ALARM 1 with ALARM NORMAL will be displayed.

Press on the “ENTER” button

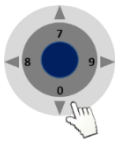
FLOW SENSOR 2 with as a standard type ANALOG will be displayed. If not SWITCH will be displayed. FLOW SENSOR 2 is the Inflow/ exhaust.

Press on the “ENTER” button

NEW CALIBRATION will be displayed.

Press on the “ENTER” button

FLOW ALARM 2 with HIGH and a set of values will be displayed (e.g. 0305)



Press on the arrow down until the alarms starts. By pushing the arrow the numbers will decrease by units

By maintaining a constant pressure on the arrow, the numbers will decrease by decimals

Press on the arrow up one unit at a time and wait for 2 to 3 seconds to see if the alarm stops.

Repeat the operation until the alarm stops.

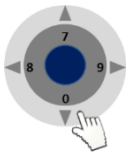
When the alarm has stopped, read the value displayed: e.g. 0225. Add 50 to the number: 0225 + 50 = 0275. Press on the arrow up until you reach this number.

Press on the “ENTER” button

FLOW ALARM 1 with LOW and a set of values will be displayed (e.g. 0205)

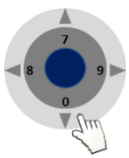
Press on the arrow up until the alarms starts. By pushing the arrow the numbers will decrease by units

By maintaining a constant pressure on the arrow, the numbers will decrease by decimals



Press on the arrow down one unit at a time and wait for 2 to 3 seconds to see if the alarm stops.

Repeat the operation until the alarm stops.



When the alarm has stopped, read the value displayed: e.g. 0125. Add 50 to the number: 0125 + 50 = 0175. Press on the arrow down until you reach this number.

Press on the “ENTER” button

FLOW ALARM 1 with ALARM NORMAL will be displayed.

Press on the “ENTER” button

FLOW SENSOR3 with TYPE NONE will be displayed.

Press on the “ENTER” button and navigate in the menu until your reach SERVICE LOGOUT

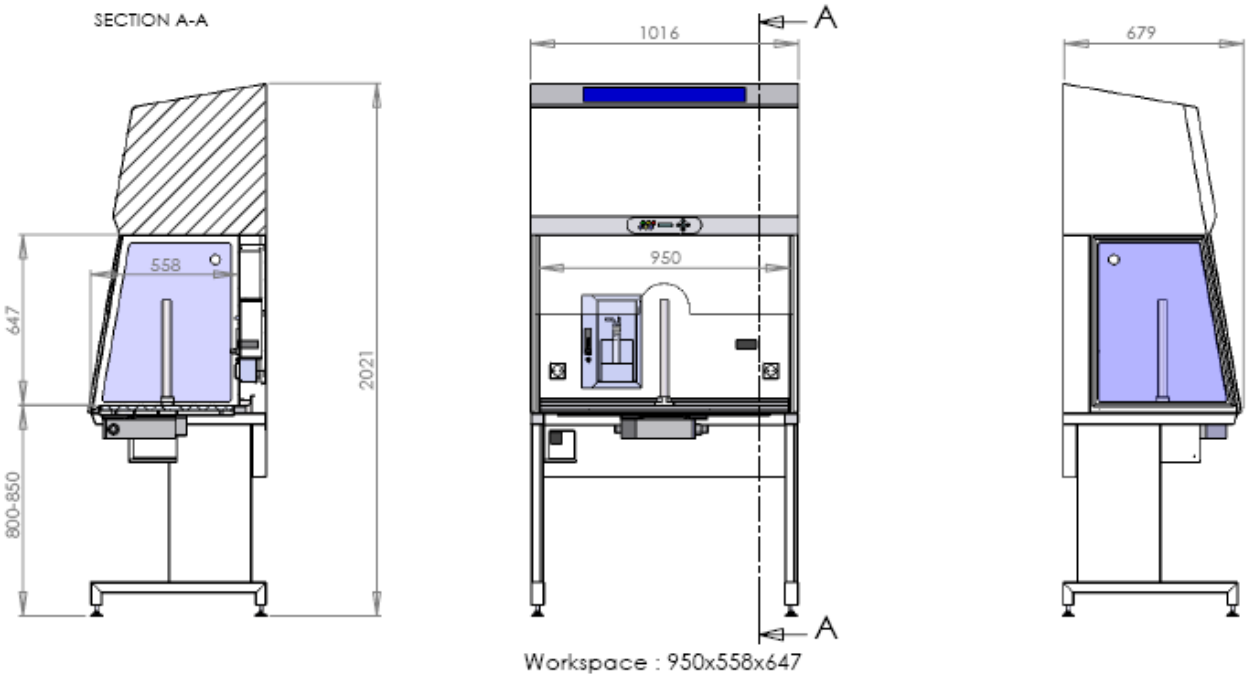
Press on the “ENTER” to LOGOUT and reach the Standard Display.

TECHNICAL SPECIFICATIONS

This manual covers the following FORTUNA Models:

FORTUNA 900 IVF or LAF

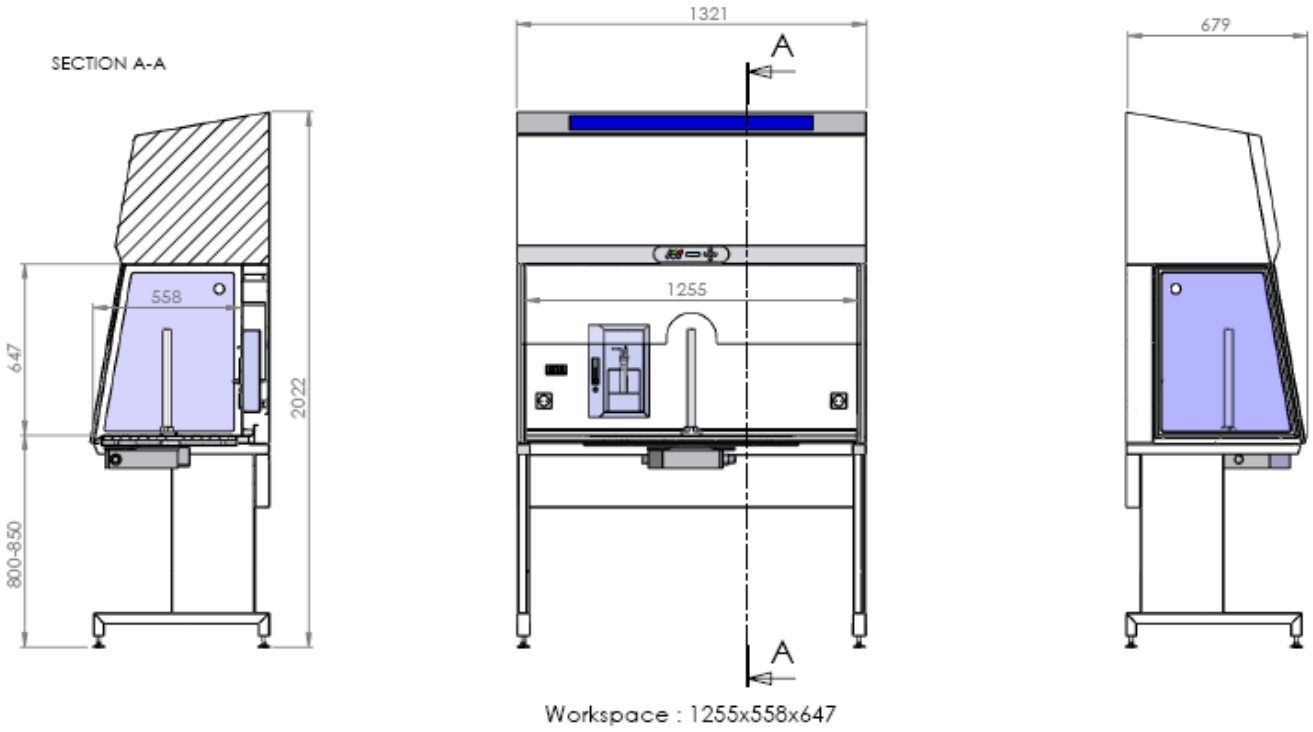
IVF model is illustrated



FORTUNA 900 IVF	
Dimensions (W x D x H)	1016 X 679 x 2021 mm
Workspace (W x D x H)	950 x 558 x 647 mm
Table plate standard height	80 – 85 cm
Air velocity, vertical flow	0,15 m/s (adjustable 0.01 -0.70 m/s)
Air Velocity, deviation	+/- 10%
Noise Level, ISO 6081	<46 dB(A)
Light intensity variable	0 – 2000 Lux
HEPA Filters, EN 1822	Efficiency is 99.999% against 0.3 μm particle H-14 size
Power consumption	125 W
Fuses	10 A
Voltage / Frequency	220-240V / 50-60 Hz or 110 -120V / 50 -60 Hz
Window material (side/Front)	Hardened / laminated safety glass
Cabinet material / Work surface	Polyester coated steel /AISI 304 stainless steel
External dimensions packed (D x W x H)	1516x916x1559 mm
Shipping volume	2,17 m³
Net weight / Gross Weight	225 Kg / 315 Kg

FORTUNA 1200 IVF or LAF

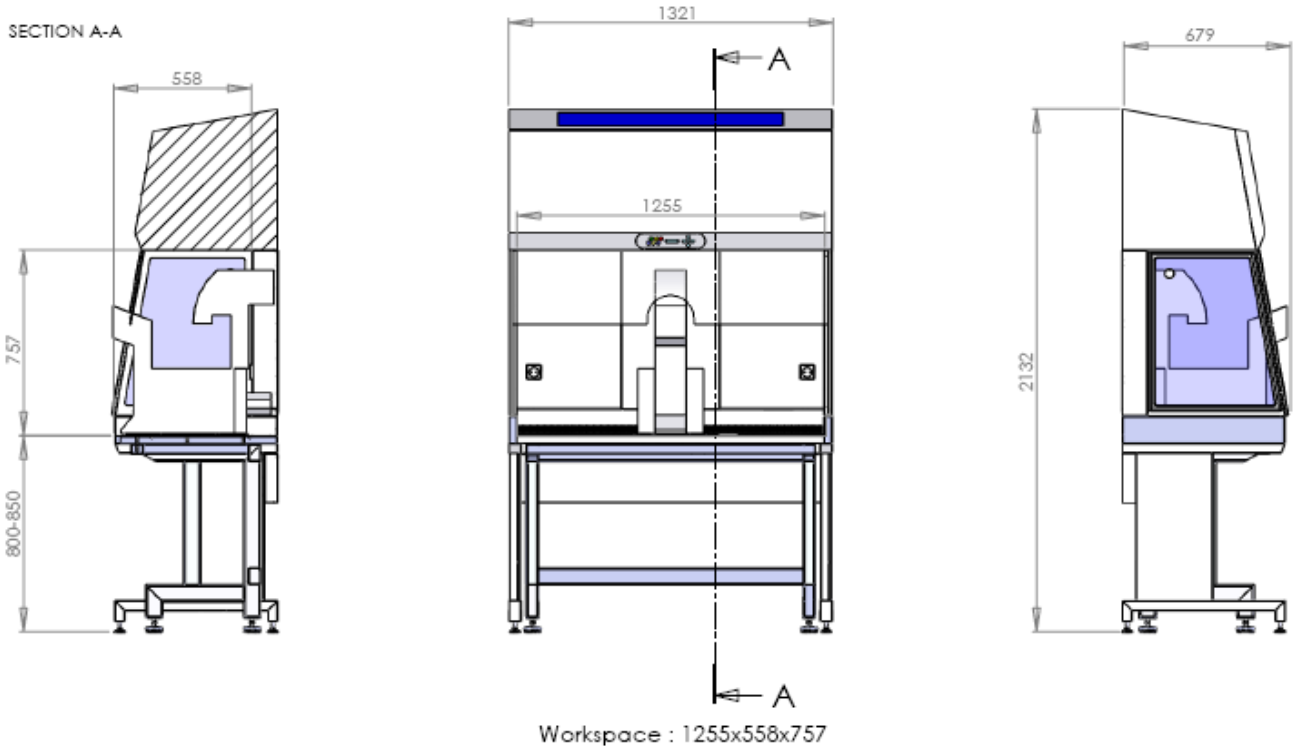
IVF model is illustrated.



Workspace : 1255x558x647

FORTUNA 1200 IVF or LAF	
Dimensions (W x D x H)	1321 X 679 x 2022 mm
Workspace (W x D x H)	1255 x 558 x 647 mm
Table plate standard height	80 – 85 cm (option 75-80 cm or 90 -95 cm or electrically adjusted)
Air velocity, vertical flow	0,15 m/s (adjustable 0.01 -0.70 m/s)
Air Velocity, deviation	+/- 10%
Noise Level, ISO 6081	<46 dB(A)
Light intensity variable	0 – 2000 Lux
HEPA Filters, EN 1822	Efficiency is 99.999% against 0.3 μm particle H-14 size
Power consumption	150 W
Fuses	10 A
Voltage / Frequency	220-240V / 50-60 Hz or 110 -120V / 50 -60 Hz
Window material (side/Front)	Hardened / laminated safety glass
Cabinet material / Work surface	Polyester coated steel /AISI 304 stainless steel
External dimensions packed (D x W x H)	1516x916x1559 mm
Shipping volume	2,17 m^3
Net weight / Gross Weight	250 Kg / 330 Kg

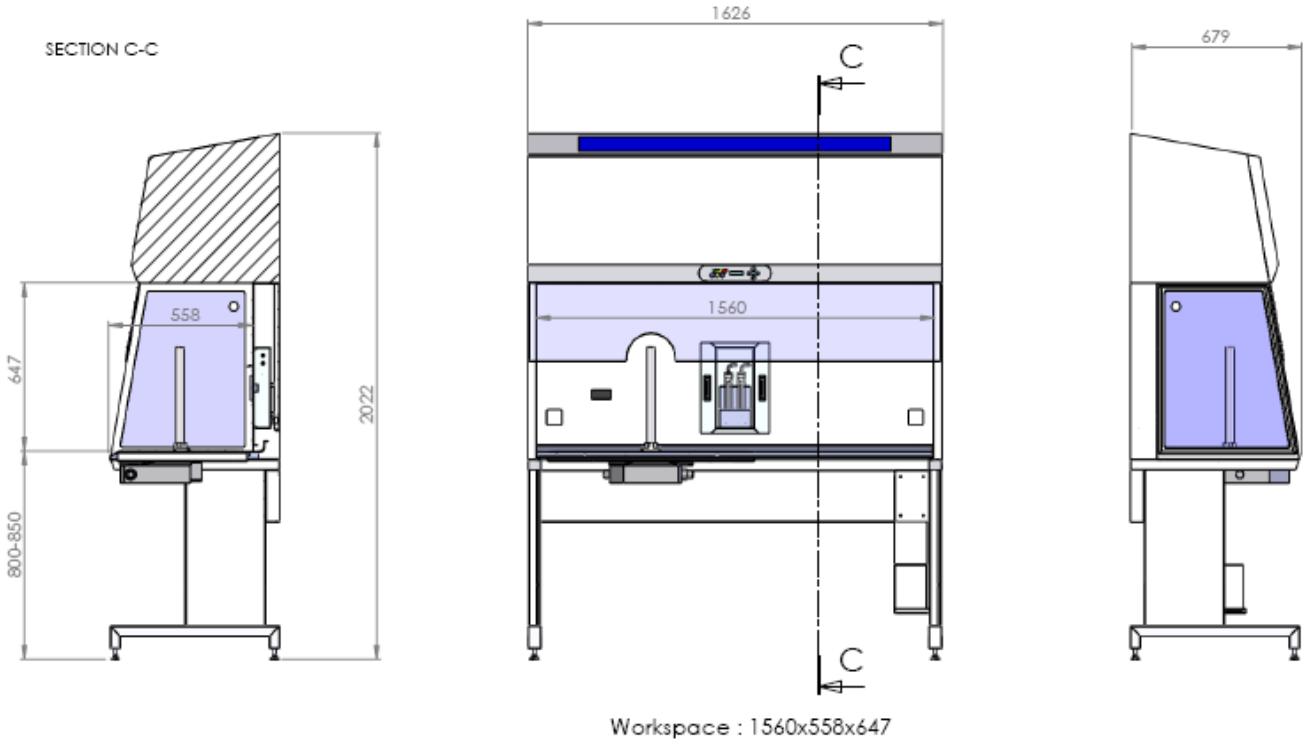
FORTUNA 1200 ICSI



FORTUNA 1200 ICSI	
Dimensions (W x D x H)	1321 X 679 x 2132 mm
Workspace (W x D x H)	1255 x 558 x 757 mm
Table plate standard height	80 – 85 cm
Air velocity, vertical flow	0,15 m/s (adjustable 0.01 -0.70 m/s)
Air Velocity, deviation	+/- 10%
Noise Level, ISO 6081	<46 dB(A)
Light intensity variable	0 – 2000 Lux
HEPA Filters, EN 1822	Efficiency is 99.999% against 0.3 μm particle H-14 size
Power consumption	150 W
Fuses	10 A
Voltage / Frequency	220-240V / 50-60 Hz or 110 -120V / 50 -60 Hz
Window material (side/Front)	Hardened / laminated safety glass
Cabinet material / Work surface	Polyester coated steel /AISI 304 stainless steel
External dimensions packed (D x W x H)	1516x916x1559 mm
Shipping volume	2,17 m^3
Net weight / Gross Weight	250 Kg / 330 Kg

FORTUNA 1500 IVF or LAF

IVF model is illustrated.

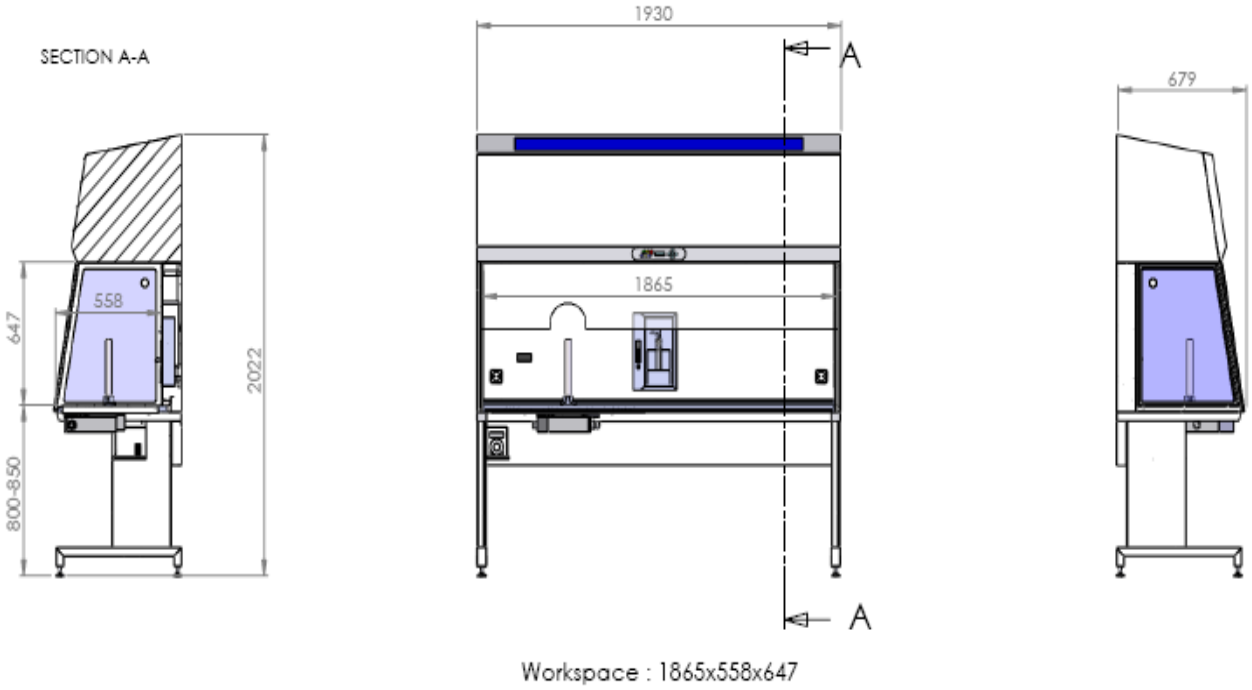


Workspace : 1560x558x647

FORTUNA 1500 IVF or LAF	
Dimensions (W x D x H)	1626 X 679 x 2022 mm
Workspace (W x D x H)	1560 x 558 x 647 mm
Table plate standard height	80 – 85 cm (option 75-80 cm or 90 -95 cm or electrically adjusted)
Air velocity, vertical flow	0,15 m/s (adjustable 0.01 -0.70 m/s)
Air Velocity, deviation	+/- 10%
Noise Level, ISO 6081	<48 dB(A)
Light intensity variable	0 – 2000 Lux
HEPA Filters, EN 1822	Efficiency is 99.999% against 0.3 μm particle H-14 size
Power consumption	175 W
Fuses	10 A
Voltage / Frequency	220-240V / 50-60 Hz or 110 -120V / 50 -60 Hz
Window material (side/Front)	Hardened / laminated safety glass
Cabinet material / Work surface	Polyester coated steel /AISI 304 stainless steel
External dimensions packed (D x W x H)	2166x916x1559 mm
Shipping volume	3,1 m³
Net weight / Gross Weight	275 Kg / 370 Kg

FORTUNA 1800 IVF or LAF

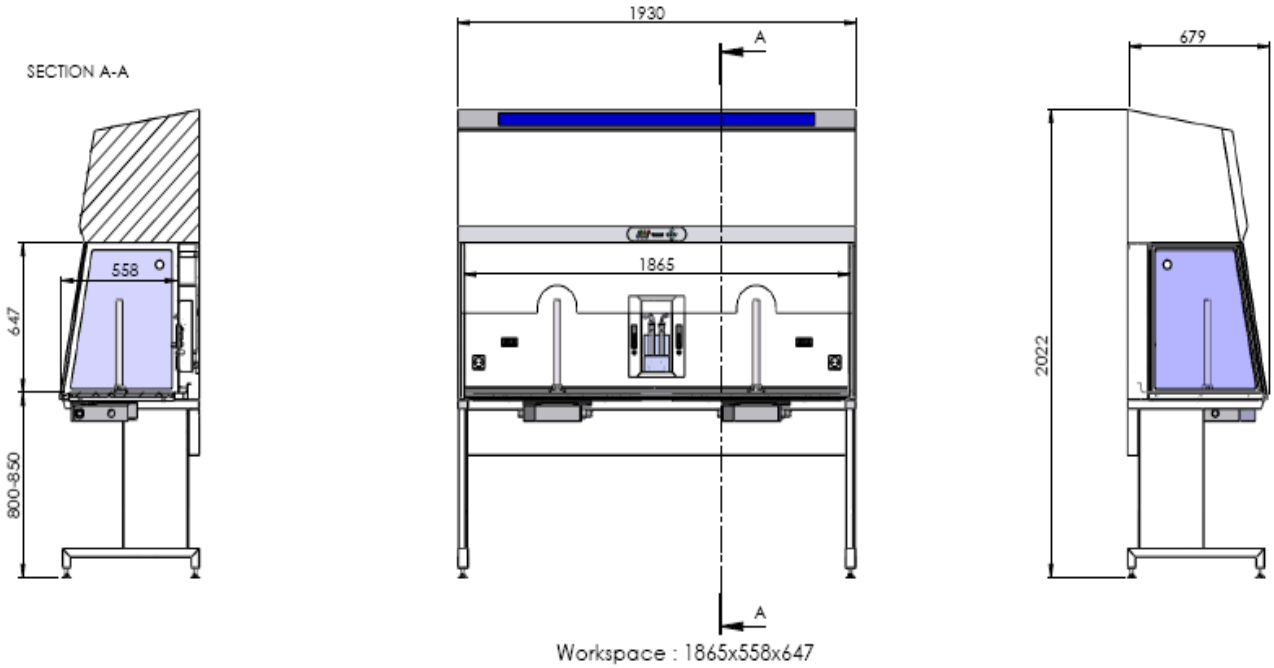
IVF model is illustrated.



FORTUNA 1800 IVF or LAF	
Dimensions (W x D x H)	1930 X 679 x 2022 mm
Workspace (W x D x H)	1865 x 558 x 647 mm
Table plate standard height	80 – 85 cm (option 75-80 cm or 90 -95 cm or electrically adjusted)
Air velocity, vertical flow	0,15 m/s (adjustable 0.01 -0.70 m/s)
Air Velocity, deviation	+/- 10%
Noise Level, ISO 6081	<48 dB(A)
Light intensity variable	0 – 2000 Lux
HEPA Filters, EN 1822	Efficiency is 99.999% against 0.3 μm particle H-14 size
Power consumption	200 W
Fuses	10 A
Voltage / Frequency	220-240V / 50-60 Hz or 110 -120V / 50 -60 Hz
Window material (side/Front)	Hardened / laminated safety glass
Cabinet material / Work surface	Polyester coated steel /AISI 304 stainless steel
External dimensions packed (D x W x H)	2166x916x1559 mm
Shipping volume	3,1 m^3
Net weight / Gross Weight	300 Kg / 400 Kg

FORTUNA 1800 Dual

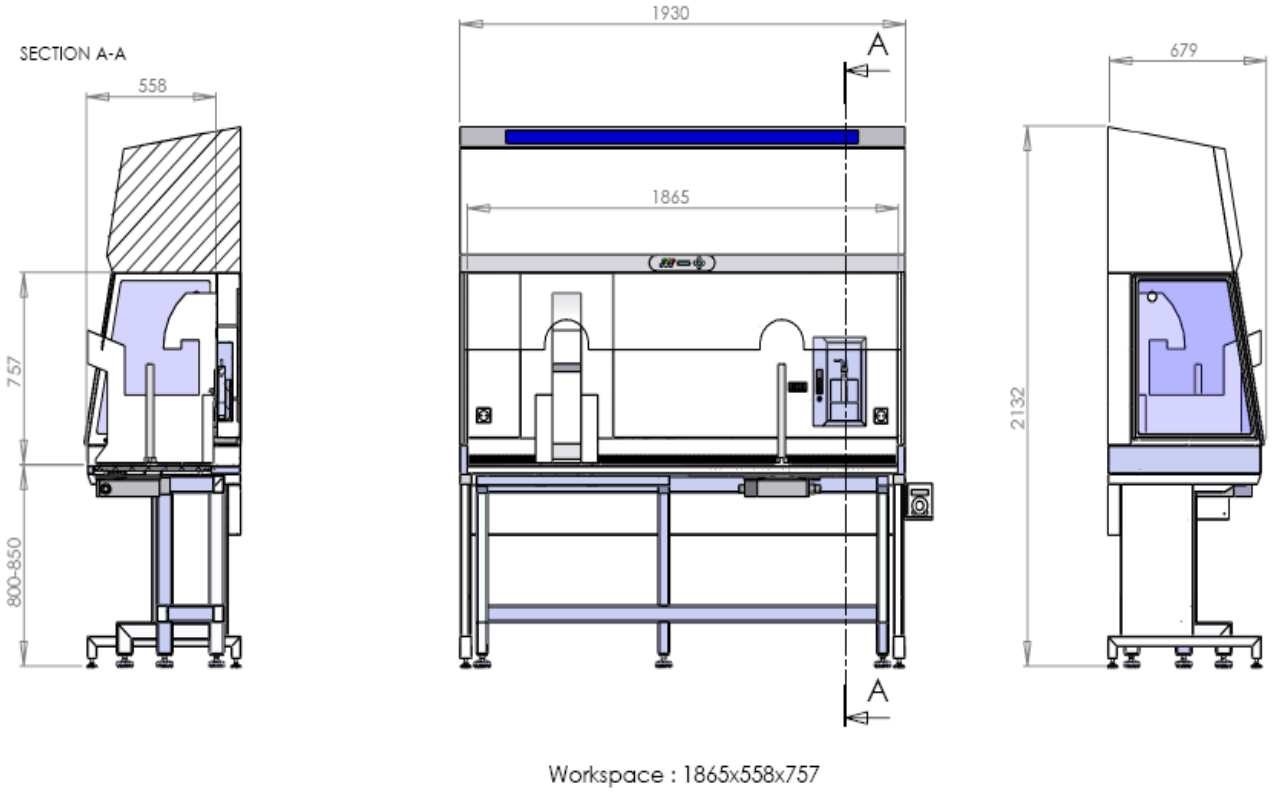
IVF model is illustrated.



FORTUNA 1800 IVF or LAF	
Dimensions (W x D x H)	1930 X 679 x 2022 mm
Workspace (W x D x H)	1865 x 558 x 647 mm
Table plate standard height	80 – 85 cm (option 75-80 cm or 90 -95 cm or electrically adjusted)
Air velocity, vertical flow	0,15 m/s (adjustable 0.01 -0.70 m/s)
Air Velocity, deviation	+/- 10%
Noise Level, ISO 6081	<48 dB(A)
Light intensity variable	0 – 2000 Lux
HEPA Filters, EN 1822	Efficiency is 99.999% against 0.3 μm particle H-14 size
Power consumption	200 W
Fuses	10 A
Voltage / Frequency	220-240V / 50-60 Hz or 110 -120V / 50 -60 Hz
Window material (side/Front)	Hardened / laminated safety glass
Cabinet material / Work surface	Polyester coated steel /AISI 304 stainless steel
External dimensions packed (D x W x H)	2166x916x1559 mm
Shipping volume	3,1 m^3
Net weight / Gross Weight	300 Kg / 400 Kg

FORTUNA 1800MP / ICSI

MP model is illustrated.



Workspace : 1865x558x757

FORTUNA 1800 MP / ICSI	
Dimensions (W x D x H)	1930 X 679 x 2132mm
Workspace (W x D x H)	1865 x 558 x 757 mm
Table plate standard height	80 – 85 cm
Air velocity, vertical flow	0,15 m/s (adjustable 0.01 -0.70 m/s)
Air Velocity, deviation	+/- 10%
Noise Level, ISO 6081	<48 dB(A)
Light intensity variable	0 – 2000 Lux
HEPA Filters, EN 1822	Efficiency is 99.999% against 0.3 μm particle H-14 size
Power consumption	200 W
Fuses	10 A
Voltage / Frequency	220-240V / 50-60 Hz or 110 -120V / 50 -60 Hz
Window material (side/Front)	Hardened / laminated safety glass
Cabinet material / Work surface	Polyester coated steel /AISI 304 stainless steel
External dimensions packed (D x W x H)	2166x916x1559 mm
Shipping volume	3,1 m³
Net weight / Gross Weight	300 Kg / 400 Kg

SPARE PARTS

Article No	DESCRIPTION
9.000.040.001	UV-light tube for FORTUNA 900-1800
9.000.040.011	Light tube for FORTUNA 900
9.000.040.012	Light tube for FORTUNA 1200
9.000.040.013	Light tube for FORTUNA 1500
9.000.040.014	Light tube for FORTUNA 1800
9.000.050.001	Main HEPA filter for FORTUNA 900
9.000.050.002	Main HEPA filter for FORTUNA 1200
9.000.050.003	Main HEPA filter FORTUNA 1500
9.000.050.004	Main HEPA filter FORTUNA 1800
9.000.050.005	Main circuit board
9.000.050.006	Flow sensor
9.000.050.007	Light ballast for FORTUNA 900 1200
9.000.050.008	Light ballast for FORTUNA 1500 1800
9.000.050.012	Display board
9.000.050.010	UV-light ballast

OPERATING THE MICROSCOPE LIGHT SOURCE

Depending on the customer order and on the configuration selected, below is the operating manual of the light sources provided by ORIGIO.

See also the section entitled “Working Heated Surface and ORIGIO Light Source”.

ORIGIO Halogen Light Source Model TLB 4000

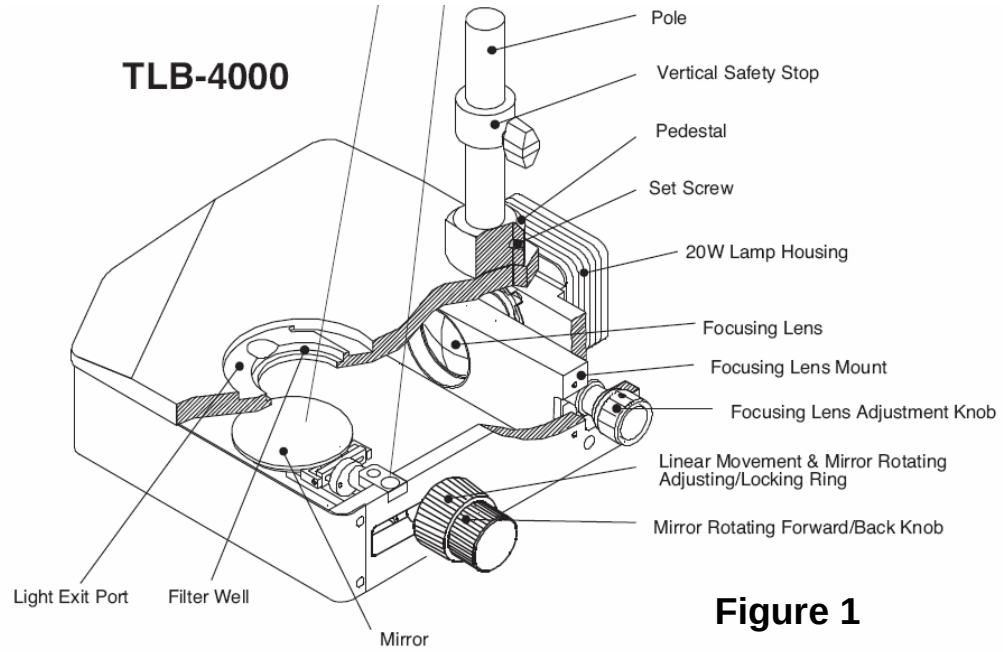


Figure 1

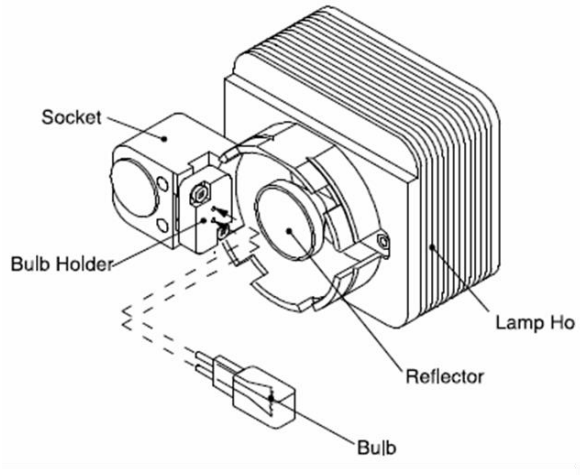


Figure 2

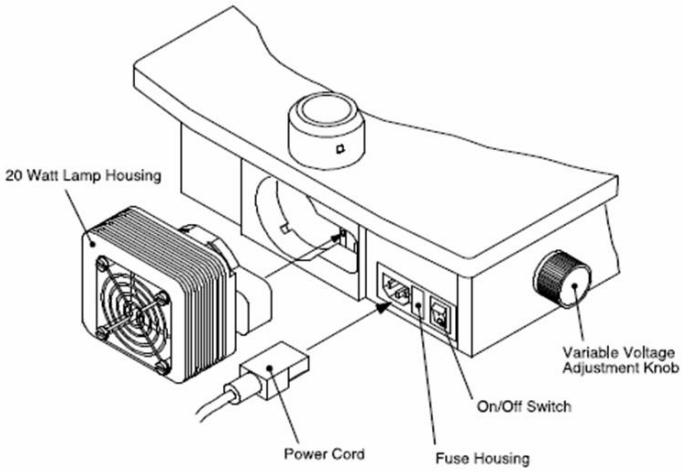


Figure 3

Operating the light source

On/off switch:

The power switch is located on the rear of the base. Turn the power switch on.

Variable voltage adjustment:
Light intensity is adjusted by the knob on the left side of the base. (Figure. 3)

Condensing lens focusing knob:
This knob is located on the right side of the base in the back. By sliding the knob back and forth you can focus the light onto the mirror. The knob can be locked in position by rotating it right (to the back).

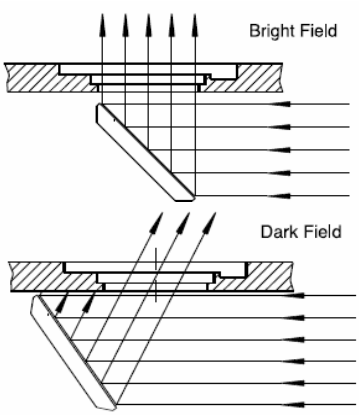
Mirror linear movement adjusting ring:
This is the inner knob on the mirror controls assembly. The function of this knob is to adjust the amount of friction in the linear front to back movement of the mirror and tilting of the mirror. Clockwise tightening of the knob increases the friction in the assembly. This will also lock down the rotational movement.

	To lock down the mirror, turn the knob gently.
	DO NOT OVER TIGHTEN

Mirror front to back rotation knob:
This is the outer knob on the mirror controls assembly. The function of this knob is for tilting the mirror front to back. Its travels are limited to prevent the mirror from hitting the top or bottom of the base. The travel range is 0° - 55°.

Brightfield operation:
To achieve a brightfield illumination, the mirror should be moved to its rear most position, (away from user), and the light directed through the glass stage plate.

Single direction darkfield:
To achieve one directional darkfield the mirror can be moved to its forward most position (towards the user), the light will be directed back through the glass stage plate.



Replacing the light bulb

	DO NOT TOUCH A HALOGEN LIGHT BULB WITH BARE HANDS, AS IT WIL LEAVE RESIDUE ON THE BULB.

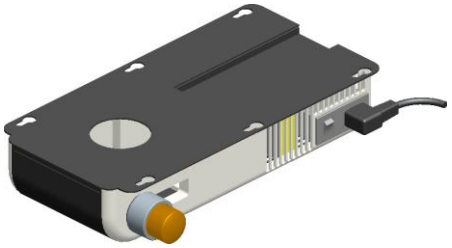
Switch off the light source on the main switch on the back.Pull out the lamp housing at the back, as indicated in Figure 3.

Remove the defective bulb as indicated in Figure 2 and replace it with a new one. Replace the housing back by pushing it into its location located at the back of the lamp source.

Switch on the Light source with the ON/ OFF switch.

ORIGIO LED Light Source Model TLB 7000

Please refer to the User Manual provided with the light source.



OPERATING THE STEROMICROSCOPE HEATED GLASS STAGE – HG37 MODEL

HG37 Heated Glass Stage
User Manual

origio

Depending on the customer order and on the configuration selected, the work surface can be fitted with a heated glass stage. To Operate ORIGIO's HG37 Heated Glass, please refer to the user manual provided with the device.

OPERATING THE LCD MONITOR

Depending on the customer order and on the configuration selected, please refer to the User manual provided with the monitor.

WARRANTY AND LIABILITY

Limited Warranty

ORIGIO Equipment warrants to the purchasers of all devices and products solely manufactured by ORIGIO EQUIPMENT.

In the event of product failure under normal use, due to defects in material or workmanship, within a period of twenty four months (24) months from the date of invoice of the Product and from the point of origin, the product will be repaired, or at ORIGIO EQUIPMENT option, replaced, at **no** charge. ORIGIO EQUIPMENT assumes that the Purchaser is experienced in the use of this device and is able to judge from his/her own expertise the suitability or otherwise of the product for the intended use. This limited warranty does not apply to products subjected to abnormal use or conditions, improper storage, damaged by accident, misuse or abuse, improper line voltage, products whose serial number has been altered, to products not shipped in accordance with the recommendations of ORIGIO EQUIPMENT , and/or to products altered or serviced by anyone other than ORIGIO EQUIPMENT authorized distributors. Distributor is responsible for the labor and travel costs during this period.

This limited warranty is exclusive and in lieu of all other warranties whether written, oral, expressed or implied. In particular, ORIGIO EQUIPMENT does not warrant that the product is suitable for the needs of the purchaser and there are no warranties given as to merchantability or fitness for a particular purpose other than the one specified in ORIGIO EQUIPMENT literature that accompanies every specific product.

ORIGIO EQUIPMENT reserves the right to change or discontinue this product without prior notice.

Liability:

Because ORIGIO EQUIPMENT has no control or influence over the conditions under which this device is used, over its method of use or administration, or on handling of the product after it leaves its possession ORIGIO EQUIPMENT takes no responsibility for the results, use and/or performance of the product. ORIGIO EQUIPMENT expects that use of the product will be confined to trained and expert users.

In no event shall ORIGIO EQUIPMENT be liable for any direct or indirect damages including incidental, consequential or special damages, arising out of or in connection with the use or performance of the product.

If ORIGIO EQUIPMENT provides you with technical documentation, this does not authorize you to perform repairs, adjustments or alterations on the device or accessories.

No representative of ORIGIO EQUIPMENT and no vendor of the product is authorized to change any of the foregoing terms and conditions, and the purchaser accepts the product subject to all terms and conditions herein, subject always to any contrary provisions which are necessarily implied by stature or law notwithstanding the within terms and conditions.

Replacement

As mentioned in the Limited Warranty, The decision whether to provide any remedy or whether to refund any portion of the purchase price shall be at the discretion of ORIGIO EQUIPMENT.

Before returning a product for any reason, please contact your nearest ORIGIO EQUIPMENT distributor for assistance and instructions.

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